Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (Currently Amended) A method for improving utilization in a peer-to-peer network having a plurality of nodes, the method comprising:

~~assigning~~ hosting one or more storage slots [[to]] in each node in the peer-to-peer network, a first portion of the storage slots ~~allocated for~~ hosting storage zones and any remaining storage slots at each node allocated as a free slot reserve storage slot;

~~inserting~~ storing data in[[to]] the storage slots hosting storage zones; and

when a storage slot hosting a storage zone reaches [[its]] a full capacity of the storage zone,

      splitting the data in the storage slot hosting the storage zone into a first and second portion,

      converting a free slot reserve storage slot into a new storage slot hosting a storage zone, and

      transferring the second portion of the data to the new storage slot hosting the storage zone.

2.   (Previously Presented) The method of claim 1 wherein each node is assigned more storage slots than its actual physical capacity allows.

3.   (Original) The method of claim 2 wherein each node is allocated $N - 1$ virtual slots for each N storage slots allocated.

4.   (Original) The method of claim 2 wherein a storage zone at a node is transferred to another node in the peer-to-peer network if the data inserted into the storage zones at the node fills the actual physical capacity of the node.

5.   (Original) The method of claim 4 where a local search for candidate nodes in a transfer set is conducted prior to transfer of the storage zone.

6. (Currently Amended) The method of claim 1 wherein the new storage zone is transferred to and hosted by a free slot reserve storage slot on a different node when the storage zones hosted at the node exceed the storage slots allocated at the node.

7. (Original) The method of claim 6 where a local search for candidate nodes in a transfer set is conducted prior to transfer of the new storage zone.

8. (Original) The method of claim 1 wherein the data is associated with hashkeys of a hash function and where each storage zone is responsible for a subset of all hashkeys.

9. (Original) The method of claim 8 wherein the hashkeys are uniformly distributed by the hash function.

10. (Original) The method of claim 1 wherein the storage slots are of a fixed-size.

11. (Currently Amended) A method for improving utilization in a peer-to-peer network, the method comprising:

assigning hosting one or more storage slots [[to]] in each node in the peer-to-peer network, a first portion of the storage slots allocated for hosting storage zones and any remaining storage slots at each node allocated as a free slot reserve storage slot; and

when a new node is added to the peer-to-peer network, transferring at least one storage zone from another node in the peer-to-peer network to the new node such that a storage slot of the new node hosts the transferred storage zone so as to maintain at least one storage slot hosting at least one storage zone at each node in the peer-to-peer network.

12. (Original) The method of claim 11 wherein the storage zone at the another node is eagerly split into a first and second portion with the second portion transferred to the new storage zone at the new node.

13.   (Original) The method of claim 12 wherein each node maintains no more than one eagerly split zone.

14.   (Original) The method of claim 11 wherein the another node has two or more storage zones and one of these storage zones is transferred to the new node to become the new storage zone on the new node.

15.   (Original) The method of claim 11 wherein a search is conducted among a local set of nodes in the peer-to-peer network for a storage zone to transfer to the new node.

16.   (Currently Amended) A node for a peer-to-peer network comprising:
        ~~, the node assigned~~ a number of real storage slots for storage of objects having a real capacity; and ~~in the peer-to-peer network~~
        a number of virtual storage slots having a virtual capacity wherein a total capacity of the ~~number of~~ real and virtual storage slots combined exceeds actual physical storage capacity of the node.

17.   (Currently Amended) The node of claim 16 where the number of real and virtual storage slots combined maintained by the node is equal to 2xN-1 where N is a number of real storage slots that would fill the node's actual physical storage capacity.

18.   (Currently Amended) The node of claim 16 where the objects stored in one of the total number of slots at the node are transferred to another node in the peer-to-peer network if objects stored in the slots at the node fill the actual physical capacity of the node.

19.   (Original) The node of claim 16 wherein the objects are associated with hashkeys of a hash function and where each node is responsible for a subset of all hashkeys.

20.   (Original) The node of claim 16 wherein the slots are of a fixed-size.

21.   (Currently Amended) The method of claim 1, wherein each storage zone is <u>hosted by a storage slot</u> located within a particular physical node.

22.   Canceled.

23.   (Currently Amended) The method of claim 11, wherein each storage zone is <u>hosted by a storage slot</u> located within a particular physical node.

24.   Canceled.

25.   (Previously Presented) The method of claim 1, wherein a zone is hosted within a slot and a size of the slot is a system wide constraint representing the limit size to which a zone can grow before it fills the slot and must be split.

26.   (Previously Presented) The method of claim 11, wherein a zone is hosted within a slot and a size of the slot is a system wide constraint representing the limit size to which a zone can grow before it fills the slot and must be split.

27.   (Currently Amended) The method of claim 16 wherein ~~there are one or more~~ <u>the</u> real slots [[that]] consume the entire actual physical capacity of the node and ~~one or more~~ <u>the</u> virtual slots that have no actual physical storage capacity associated with them.